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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/560,440	12/12/2005	Willis E Howard III	BYRK-021 (38484-163)	3091

7590 10/12/2006

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EXAMINER

VO, HIEN XUAN

ART UNIT PAPER NUMBER

2863

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/560,440

Applicant(s)

HOWARD, WILLIS E

Examiner

Hien X. Vo

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>12/12/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

The information disclosure statement (IDS) submitted on 12/12/05. The submission is in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 7, 13, and 21 rejected under 35 U.S.C. 102(b) as being anticipated by Kawagoe et al. (U.S. Patent No. 5,305,233).

With respect to claims 1, 7, 13, and 21, Kawagoe et al. disclose a spectrometer for accurately measuring light intensity in a specific wavelength region that includes defining, for each of the one or more light sources (see e.g. Fig. 1, item 2), a reference spectral distribution that is characteristic of the one or more light sources and comprised of reference light intensity values over a set of reference wavelengths (see e.g. col. 3, lines 7-29); defining, for each of the one or more light sources (see e.g. col. 2, lines 4-

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8), a spectral distribution comprising actual light intensity values over the set of wavelengths (see e.g. abstract, lines 14-17); determining the actual reflectance of a set of reflected signals (see e.g. col. 1, lines 57-68); at least one storage device (see e.g. Abstract), defining a set of detector sensitivity data corresponding to the set of detectors receiving the set of reflected signals (see e.g. col. 3, lines 36-43); determining high resolution reflectance values (see e.g. col. 24, lines 1-3); determining a correction factor as a function of (see e.g. col. 15, lines 28-43); and applying the correction factor to R to determine R* (see e.g. col. 18, lines 17-45).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2, 8, 14 rejected under 35 U.S.C. 103(a) as being unpatentable over Kawagoe et al. (U.S. Patent No. 5,305,233) in view of re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955).

With respect to claims 2, 8, 14, Kawagoe et al. disclose the invention as claimed except for teaching the correction factor is valid up to a range of at least about +/- 8nm around the specified center wavelength. However, Kawagoe et al. disclose the correction of scattering of the wavelength pitch to 10nm (see e.g. col. 18, lines 54-57).

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Therefore, , it would have been obvious to one of ordinary skill in the art at the time the invention was made to replace the correction factor as taught by Kawagoe because In re Aller, 220 F.2d 454, 456, 105 USPQ 233, 235 (CCPA 1955) the claimed ranges and prior art ranges do not overlap but are close enough that one skilled in the art would have expected. There was no evidence of the criticality different +/- 2nm between the claimed ranges and prior art ranges.

Claims 3-6, 9-12, 15-20 and 22, rejected under 35 U.S.C. 103(a) as being unpatentable over Kawagoe et al. (U.S. Patent No. 5,305,233) further in view of Williams et al. (U.S. Patent No. 5,359,192).

With respect to claims 3-6, 9-12, 15-20 and 22, Kawagoe et al. disclose the invention as claimed except for teaching the one or more light sources comprise LEDs, the one or more light sources and set of detectors comprise part of a reflectometer, and at least one of the one or more light sources is an infrared light source. However, Williams et al. disclose the dual-wavelength low-power built-in test for a laser-initiated ordnance system including a reflectometer (see e.g. col.1, lines 35-38), the light sources comprise LEDs (see e.g. col. 4, lines 22-24), set of detectors (see e.g. Fig. 1a, items 46, 48) and an infrared light source (see e.g. col. 11, lines 35-37). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the spectrometer of Kawagoe with a reflectometer, detectors, LED and infrared light source as taught by Williams in order to measure the amplitude of light-reflectance at any selected narrow band of light, low-power light sources, and eliminate most if not

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all of the variables normally encountered in the measurement of light reflectance by conventional techniques.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hien X. Vo whose telephone number is (571) 272-2282. The examiner can normally be reached on M-F (8:00-5:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Barlow can be reached on (571) 272-2269. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Hien Vo
09/29/06

VXW


John Barlow
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